

the Blood, the Vessels and the Heart, the latter being again subdivided into those due to the myocardium, the endocardium, the pericardium, neuroses and those due to falling blood pressure.

His second great group in this class is vicious circles in the Digestive System, subdivided again into those of the mouth, the stomach, the intestines, and the rectum and anus. A third group is vicious circles of the Respiratory System.

Without pretending to exhaustively discuss this somewhat imposing list of vicious circles, an example or two of each kind may be profitably considered.

Organic circles are those arising between two organs so interdependent that difficulty with the first may cause difficulty with the second, which in turn upsets the first, and *vice versa*. An example familiar to everyone is the dilatation of the right heart due to obstruction to the circuit in the lungs by pneumonia, the dilatation being caused by the pneumonia, and in turn aggravating the pneumonia by permitting stagnation of blood in the lungs.

Mitchell Bruce vividly describes another vicious organic circle, as follows: "When the wall of the heart fails the liver affords it temporary relief by accommodating mechanically within it the blood that otherwise would be overburdening the cardiac chambers. The hepatic functions, and in their turn the stomach and bowels, which are dependent on the portal circulation, presently become deranged, and thereupon the heart is further weakened, and it may be, finally undone, by a set of conditions made for itself and for its own immediate temporary advantage. The heart has paid dear for the accommodation; the day of reckoning has come. Bad has led to worse. A vicious circle is established—the penalty attending the accommodating process and the vicarious action by which one organ assists another in distress."

One need scarcely point out how this vicious circle may spread and involve other circles, systemic as well as portal, including organs so remote as the kidneys and the brain, a good example of what I meant a few moments ago when describing health as the proper balance and interaction of all the various circles and processes in the body.

The next group of vicious circles, the symptomatic, includes a great number perhaps readily enough suggesting themselves to you as I speak; for instance, urticaria, by its severe itching, produces scratching, with a resulting increase of the urticaria; or intussusception is due to increased peristalsis, and itself causes increased peristalsis. Strangulated hernia causes vomiting, and